

#8  
 Jehanne Souaya  
 March 22, 2001  
 1655

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/423,126

DATE: 02/16/2001  
 TIME: 10:31:56

Input Set : A:\Sequence Listing.txt  
 Output Set: N:\CRF3\02162001\I423126.raw

**ENTERED**

3 <110> APPLICANT: Buchter-Larsen, et al.  
 5 <120> TITLE OF INVENTION: A PROCESS OF PREPARING AN ANTI-OXIDANT  
 7 <130> FILE REFERENCE: 674509-2020  
 9 <140> CURRENT APPLICATION NUMBER: 09/423,126  
 10 <141> CURRENT FILING DATE: 1999-11-05  
 12 <150> PRIOR APPLICATION NUMBER: PCT/IB98/00708  
 13 <151> PRIOR FILING DATE: 1998-05-06  
 15 <150> PRIOR APPLICATION NUMBER: GB 9709161.5  
 16 <151> PRIOR FILING DATE: 1997-05-06  
 18 <160> NUMBER OF SEQ ID NOS: 12  
 20 <170> SOFTWARE: PatentIn version 3.0  
 22 <210> SEQ ID NO: 1  
 23 <211> LENGTH: 1088  
 24 <212> TYPE: PRT  
 25 <213> ORGANISM: Unknown  
 27 <220> FEATURE:  
 28 <223> OTHER INFORMATION: fungus sp. or fungus infected gracilariopsis sp.  
 30 <400> SEQUENCE: 1  
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 33 1 5 10 15  
 35 Thr Phe Val Gly Ala Glu Val Arg Ser Asn Val Arg Ile His Ser Ala  
 36 20 25 30  
 38 Phe Pro Ala Val His Thr Ala Thr Arg Lys Thr Asn Arg Leu Asn Val  
 39 35 40 45  
 41 Ser Met Thr Ala Leu Ser Asp Lys Gln Thr Ala Thr Ala Gly Ser Thr  
 42 50 55 60  
 44 Asp Asn Pro Asp Gly Ile Asp Tyr Lys Thr Tyr Asp Tyr Val Gly Val  
 45 65 70 75 80  
 47 Trp Gly Phe Ser Pro Leu Ser Asn Thr Asn Trp Phe Ala Ala Gly Ser  
 48 85 90 95  
 50 Ser Thr Pro Gly Gly Ile Thr Asp Trp Thr Ala Thr Met Asn Val Asn  
 51 100 105 110  
 53 Phe Asp Arg Ile Asp Asn Pro Ser Ile Thr Val Gln His Pro Val Gln  
 54 115 120 125  
 56 Val Gln Val Thr Ser Tyr Asn Asn Ser Tyr Arg Val Arg Phe Asn  
 57 130 135 140  
 59 Pro Asp Gly Pro Ile Arg Asp Val Thr Arg Gly Pro Ile Leu Lys Gln  
 60 145 150 155 160  
 62 Gln Leu Asp Trp Ile Arg Thr Gln Glu Leu Ser Glu Gly Cys Asp Pro  
 63 165 170 175  
 65 Gly Met Thr Phe Thr Ser Glu Gly Phe Leu Thr Phe Glu Thr Lys Asp  
 66 180 185 190  
 68 Leu Ser Val Ile Ile Tyr Gly Asn Phe Lys Thr Arg Val Thr Arg Lys  
 69 195 200 205  
 71 Ser Asp Gly Lys Val Ile Met Glu Asn Asp Glu Val Gly Thr Ala Ser  
 72 210 215 220  
 74 Ser Gly Asn Lys Cys Arg Gly Leu Met Phe Val Asp Arg Leu Tyr Gly

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75 225                230                235                240
77 Asn Ala Ile Ala Ser Val Asn Lys Asn Phe Arg Asn Asp Ala Val Lys
78                245                250                255
80 Gln Glu Gly Phe Tyr Gly Ala Gly Glu Val Asn Cys Lys Tyr Gln Asp
81                260                265                270
83 Thr Tyr Ile Leu Glu Arg Thr Gly Ile Ala Met Thr Asn Tyr Asn Tyr
84                275                280                285
86 Asp Asn Leu Asn Tyr Asn Gln Trp Asp Leu Arg Pro Pro His His Asp
87                290                295                300
89 Gly Ala Leu Asn Pro Asp Tyr Tyr Ile Pro Met Tyr Tyr Ala Ala Pro
90 305                310                315                320
92 Trp Leu Ile Val Asn Gly Cys Ala Gly Thr Ser Glu Gln Tyr Ser Tyr
93                325                330                335
95 Gly Trp Phe Met Asp Asn Val Ser Gln Ser Tyr Met Asn Thr Gly Asp
96                340                345                350
98 Thr Thr Trp Asn Ser Gly Gln Glu Asp Leu Ala Tyr Met Gly Ala Gln
99                355                360                365
101 Tyr Gly Pro Phe Asp Gln His Phe Val Tyr Gly Ala Gly Gly Gly Met
102                370                375                380
104 Glu Cys Val Val Thr Ala Phe Ser Leu Leu Gln Gly Lys Glu Phe Glu
105 385                390                395                400
107 Asn Gln Val Leu Asn Lys Arg Ser Val Met Pro Pro Lys Tyr Val Phe
108                405                410                415
110 Gly Phe Phe Gln Gly Val Phe Gly Thr Ser Ser Leu Leu Arg Ala His
111                420                425                430
113 Met Pro Ala Gly Glu Asn Asn Ile Ser Val Glu Glu Ile Val Glu Gly
114                435                440                445
116 Tyr Gln Asn Asn Asn Phe Pro Phe Glu Gly Leu Ala Val Asp Val Asp
117                450                455                460
119 Met Gln Asp Asn Leu Arg Val Phe Thr Thr Lys Gly Glu Phe Trp Thr
120 465                470                475                480
122 Ala Asn Arg Val Gly Thr Gly Gly Asp Pro Asn Asn Arg Ser Val Phe
123                485                490                495
125 Glu Trp Ala His Asp Lys Gly Leu Val Cys Gln Thr Asn Ile Thr Cys
126                500                505                510
128 Phe Leu Arg Asn Asp Asn Glu Gly Gln Asp Tyr Glu Val Asn Gln Thr
129                515                520                525
131 Leu Arg Glu Arg Gln Leu Tyr Thr Lys Asn Asp Ser Leu Thr Gly Thr
132                530                535                540
134 Asp Phe Gly Met Thr Asp Asp Gly Pro Ser Asp Ala Tyr Ile Gly His
135 545                550                555                560
137 Leu Asp Tyr Gly Gly Gly Val Glu Cys Asp Ala Leu Phe Pro Asp Trp
138                565                570                575
140 Gly Arg Pro Asp Val Ala Glu Trp Trp Gly Asn Asn Tyr Lys Lys Leu
141                580                585                590
143 Phe Ser Ile Gly Leu Asp Phe Val Trp Gln Asp Met Thr Val Pro Ala
144                595                600                605
146 Met Met Pro His Lys Ile Gly Asp Asp Ile Asn Val Lys Pro Asp Gly
147                610                615                620

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149 Asn Trp Pro Asn Ala Asp Asp Pro Ser Asn Gly Gln Tyr Asn Trp Lys
150 625 630 635 640
152 Thr Tyr His Pro Gln Val Leu Val Thr Asp Met Arg Tyr Glu Asn His
153 645 650 655
155 Gly Arg Glu Pro Met Val Thr Gln Arg Asn Ile His Ala Tyr Thr Leu
156 660 665 670
158 Cys Glu Ser Thr Arg Lys Glu Gly Ile Val Glu Asn Ala Asp Thr Leu
159 675 680 685
161 Thr Lys Phe Arg Arg Ser Tyr Ile Ile Ser Arg Gly Gly Tyr Ile Gly
162 690 695 700
164 Asn Gln His Phe Gly Gly Met Trp Val Gly Asp Asn Ser Thr Thr Ser
165 705 710 715 720
167 Asn Tyr Ile Gln Met Met Ile Ala Asn Asn Ile Asn Met Asn Met Ser
168 725 730 735
170 Cys Leu Pro Leu Val Gly Ser Asp Ile Gly Gly Phe Thr Ser Tyr Asp
171 740 745 750
173 Asn Glu Asn Gln Arg Thr Pro Cys Thr Gly Asp Leu Met Val Arg Tyr
174 755 760 765
176 Val Gln Ala Gly Cys Leu Leu Pro Trp Phe Arg Asn His Tyr Asp Arg
177 770 775 780
179 Trp Ile Glu Ser Lys Asp His Gly Lys Asp Tyr Gln Glu Leu Tyr Met
180 785 790 795 800
182 Tyr Pro Asn Glu Met Asp Thr Leu Arg Lys Phe Val Glu Phe Arg Tyr
183 805 810 815
185 Arg Trp Gln Glu Val Leu Tyr Thr Ala Met Tyr Gln Asn Ala Ala Phe
186 820 825 830
188 Gly Lys Pro Ile Ile Lys Ala Ala Ser Met Tyr Asn Asn Asp Ser Asn
189 835 840 845
191 Val Arg Arg Ala Gln Asn Asp His Phe Leu Leu Gly Gly His Asp Gly
192 850 855 860
194 Tyr Arg Ile Leu Cys Ala Pro Val Val Trp Glu Asn Ser Thr Glu Arg
195 865 870 875 880
197 Glu Leu Tyr Leu Pro Val Leu Thr Gln Trp Tyr Lys Phe Gly Pro Asp
198 885 890 895
200 Phe Asp Thr Lys Pro Leu Glu Gly Ala Met Asn Gly Gly Asp Arg Ile
201 900 905 910
203 Tyr Asn Tyr Pro Val Pro Gln Ser Glu Ser Pro Ile Phe Val Arg Glu
204 915 920 925
206 Gly Ala Ile Leu Pro Thr Arg Tyr Thr Leu Asn Gly Glu Asn Lys Ser
207 930 935 940
209 Leu Asn Thr Tyr Thr Asp Glu Asp Pro Leu Val Phe Glu Val Phe Pro
210 945 950 955 960
212 Leu Gly Asn Asn Arg Ala Asp Gly Met Cys Tyr Leu Asp Asp Gly Gly
213 965 970 975
215 Val Thr Thr Asn Ala Glu Asp Asn Gly Lys Phe Ser Val Val Lys Val
216 980 985 990
218 Ala Ala Glu Gln Asp Gly Gly Thr Glu Thr Ile Thr Phe Thr Asn Asp
219 995 1000 1005
221 Cys Tyr Glu Tyr Val Phe Gly Gly Pro Phe Tyr Val Arg Val Arg

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222      1010      1015      1020
224 Gly Ala Gln Ser Pro Ser Asn Ile His Val Ser Ser Gly Ala Gly
225      1025      1030      1035
227 Ser Gln Asp Met Lys Val Ser Ser Ala Thr Ser Arg Ala Ala Leu
228      1040      1045      1050
230 Phe Asn Asp Gly Glu Asn Gly Asp Phe Trp Val Asp Gln Glu Thr
231      1055      1060      1065
233 Asp Ser Leu Trp Leu Lys Leu Pro Asn Val Val Leu Pro Asp Ala
234      1070      1075      1080
236 Val Ile Thr Ile Thr
237      1085
239 <210> SEQ ID NO: 2
240 <211> LENGTH: 1091
241 <212> TYPE: PRT
242 <213> ORGANISM: Unknown
244 <220> FEATURE:
245 <223> OTHER INFORMATION: fungus sp. or fungus infected gracilariopsis sp.
247 <400> SEQUENCE: 2
249 Met Tyr Pro Thr Leu Thr Phe Val Ala Pro Ser Ala Leu Gly Ala Arg
250 1      5      10      15
252 Thr Phe Thr Cys Val Gly Ile Phe Arg Ser His Ile Leu Ile His Ser
253      20      25      30
255 Val Val Pro Ala Val Arg Leu Ala Val Arg Lys Ser Asn Arg Leu Asn
256      35      40      45
258 Val Ser Met Ser Ala Leu Phe Asp Lys Pro Thr Ala Val Thr Gly Gly
259      50      55      60
261 Lys Asp Asn Pro Asp Asn Ile Asn Tyr Thr Thr Tyr Asp Tyr Val Pro
262 65      70      75      80
264 Val Trp Arg Phe Asp Pro Leu Ser Asn Thr Asn Trp Phe Ala Ala Gly
265      85      90      95
267 Ser Ser Thr Pro Gly Asp Ile Asp Asp Trp Thr Ala Thr Met Asn Val
268      100      105      110
270 Asn Phe Asp Arg Ile Asp Asn Pro Ser Phe Thr Leu Glu Lys Pro Val
271      115      120      125
273 Gln Val Gln Val Thr Ser Tyr Lys Asn Asn Cys Phe Arg Val Arg Phe
274      130      135      140
276 Asn Pro Asp Gly Pro Ile Arg Asp Val Asp Arg Gly Pro Ile Leu Gln
277 145      150      155      160
279 Gln Gln Leu Asn Trp Ile Arg Lys Gln Glu Gln Ser Lys Gly Phe Asp
280      165      170      175
282 Pro Lys Met Gly Phe Thr Lys Glu Gly Phe Leu Lys Phe Glu Thr Lys
283      180      185      190
285 Asp Leu Asn Val Ile Ile Tyr Gly Asn Phe Lys Thr Arg Val Thr Arg
286      195      200      205
288 Lys Arg Asp Gly Lys Gly Ile Met Glu Asn Asn Glu Val Pro Ala Gly
289      210      215      220
291 Ser Leu Gly Asn Lys Cys Arg Gly Leu Met Phe Val Asp Arg Leu Tyr
292 225      230      235      240
294 Gly Thr Ala Ile Ala Ser Val Asn Glu Asn Tyr Arg Asn Asp Pro Asp

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295          245          250          255
297 Arg Lys Glu Gly Phe Tyr Gly Ala Gly Glu Val Asn Cys Glu Phe Trp
298          260          265          270
300 Asp Ser Glu Gln Asn Arg Asn Lys Tyr Ile Leu Glu Arg Thr Gly Ile
301          275          280          285
303 Ala Met Thr Asn Tyr Asn Tyr Asp Asn Tyr Asn Tyr Asn Gln Ser Asp
304          290          295          300
306 Leu Ile Ala Pro Gly Tyr Pro Ser Asp Pro Asn Phe Tyr Ile Pro Met
307 305          310          315          320
309 Tyr Phe Ala Ala Pro Trp Val Val Val Lys Gly Cys Ser Gly Asn Ser
310          325          330          335
312 Asp Glu Gln Tyr Ser Tyr Gly Trp Phe Met Asp Asn Val Ser Gln Thr
313          340          345          350
315 Tyr Met Asn Thr Gly Gly Thr Ser Trp Asn Cys Gly Glu Glu Asn Leu
316          355          360          365
318 Ala Tyr Met Gly Ala Gln Cys Gly Pro Phe Asp Gln His Phe Val Tyr
319          370          375          380
321 Gly Asp Gly Asp Gly Leu Glu Asp Val Val Gln Ala Phe Ser Leu Leu
322 385          390          395          400
324 Gln Gly Lys Glu Phe Glu Asn Gln Val Leu Asn Lys Arg Ala Val Met
325          405          410          415
327 Pro Pro Lys Tyr Val Phe Gly Tyr Phe Gln Gly Val Phe Gly Ile Ala
328          420          425          430
330 Ser Leu Leu Arg Glu Gln Arg Pro Glu Gly Gly Asn Asn Ile Ser Val
331          435          440          445
333 Gln Glu Ile Val Glu Gly Tyr Gln Ser Asn Asn Phe Pro Leu Glu Gly
334          450          455          460
336 Leu Ala Val Asp Val Asp Met Gln Gln Asp Leu Arg Val Phe Thr Thr
337 465          470          475          480
339 Lys Ile Glu Phe Trp Thr Ala Asn Lys Val Gly Thr Gly Gly Asp Ser
340          485          490          495
342 Asn Asn Lys Ser Val Phe Glu Trp Ala His Asp Lys Gly Leu Val Cys
343          500          505          510
345 Gln Thr Asn Val Thr Cys Phe Leu Arg Asn Asp Asn Gly Gly Ala Asp
346          515          520          525
348 Tyr Glu Val Asn Gln Thr Leu Arg Glu Lys Gly Leu Tyr Thr Lys Asn
349          530          535          540
351 Asp Ser Leu Thr Asn Thr Asn Phe Gly Thr Thr Asn Asp Gly Pro Ser
352 545          550          555          560
354 Asp Ala Tyr Ile Gly His Leu Asp Tyr Gly Gly Gly Gly Asn Cys Asp
355          565          570          575
357 Ala Leu Phe Pro Asp Trp Gly Arg Pro Gly Val Ala Glu Trp Trp Gly
358          580          585          590
360 Asp Asn Tyr Ser Lys Leu Phe Lys Ile Gly Leu Asp Phe Val Trp Gln
361          595          600          605
363 Asp Met Thr Val Pro Ala Met Met Pro His Lys Val Gly Asp Ala Val
364          610          615          620
366 Asp Thr Arg Ser Pro Tyr Gly Trp Pro Asn Glu Asn Asp Pro Ser Asn
367 625          630          635          640

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VERIFICATION SUMMARY  
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